

THE LOCAL FOOD MOVEMENT:  
A MORE SUSTAINABLE BUSINESS MODEL

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by  
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## **Abstract**

### **THE LOCAL FOOD MOVEMENT: A MORE SUSTAINABLE BUSINESS MODEL**

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The commercialization of agriculture has proven to be detrimental not only from an environmental standpoint with greenhouse gas emissions at 13% of total emissions, deforestation devastating ecologies, and harmful pesticides and fertilizers poisoning ground water and killing wildlife, but also from a social standpoint with child labor at 60% of industry work force, a loss of nutritional value in food, increased food contamination, and increased diet-related chronic illness. As these negative effects have become increasingly prominent and awareness of the importance of healthy, clean, and fair food rises, the local food movement has continued to grow in popularity.

As local farms begin to compete more with commercial agriculture there are five core competencies that local farmers need to embrace in order to maintain their competitive advantage and remain a viable business. After discussing these core competencies, the business model canvas theory will be presented through the lens of the circular and sharing economies, allowing for the creation of a holistic, sustainable business model for the local food movement.

This thesis will be set in the context of the High Country in North Carolina where farming has deep roots. The High Country is experiencing high unemployment rates, above state and national levels, and the lack of nutritional health is a looming concern for many community members. Therefore, the goal of this thesis is to introduce local farmers in the High Country to the fundamental business tools associated with sustainable business. This platform will encourage and enable the creation of more small farms that can not only provide access to healthy food for the community, but also stimulate the economy through job creation and cash flow.

## **Acknowledgements**

My deep gratitude goes first to all of the farmers who participated in this research. Knowing how valuable your time is and the sacrifices you made to accommodate my research was very meaningful. I am humbled by your acceptance of the work I am doing, as well as your willingness to come alongside me, helping me understand the importance of the local food system from the farmers' point of view. Without your knowledge and expertise, this thesis would not have been possible. It is truly the work you all do on a daily basis that is revolutionizing the High Country and the food system as a whole.

I would also like to recognize the Blue Ridge Women in Agriculture's Executive Director, Ms. Carol Coulter, who spent many hours of her time helping me identify how I could produce a research project that would advance the local food movement and prove to be a useful resource for new and existing farms in the High Country.

My appreciation also extends to Dr. Tammy Kowalczyk, Dr. Lanae Ball, and Dr. Elizabeth Shay. Your guidance and support throughout this process provided an environment that not only allowed for the completion of my thesis, but also encouraged me to challenge myself to go beyond what is expected and create a final project that provides real value to the community.

Finally, I would like to thank my fiancée and my family for their love and support. Their willingness to listen to all my ideas and read multiple iterations of this paper, helping me carefully articulate specific details within the local food movement, proved invaluable.

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## *1. Introduction*

Nutritional security is among the most basic human rights, and thus should be considered necessary for all communities. According to the United Nations General Assembly, “food and nutritional security exists when all people, at all times, have physical, social, and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (United Nations General Assembly [UNGA], 2012).

Because food is required to sustain life, the reliability of food systems is vital to any society that aims to be sustainable, or, in other words, any society that looks to continue indefinitely. However, a brief glimpse into the current agricultural practices of most modern societies may lead one to believe that agriculture systems and food consumed are not of utmost importance. Currently, agriculture accounts for 13% of greenhouse gas emissions globally, not including the transportation of goods (Russell, 2014). In addition, standards practiced around the globe are devastating the landscape and ruining the integrity of the natural environment, leading to catastrophic destruction, from loss of forests to vast dead zones in oceans. Socially, there are even more urgent and dire issues within the agriculture sector, such as child labor, which accounts for 60% of the labor force in the industry, unsafe exposure to poisonous chemicals used as fertilizers and pesticides, and human trafficking, which arises from the seasonality of agriculture and the use of labor recruiters (Nestor, 2013).

While these are primarily issues stemming from the production side of agriculture, there are also significant downfalls for the consumer when looking at the current agriculture industry as a whole. For millions of children and their families, a lack of calories and nutrients in food leads to a decline in health, and for others, mainly in the West, an abundance of food, absent of

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nutritional value, leads to health problems. To meet current and future demands, the commercialized methods of agriculture employed today will have to increase yields 70% by the year 2050 in order to meet the population demand (“How to Feed”, 2009). This increase will require land that does not exist as 50% of fertile land is already being cultivated, and production yield increases will not be sufficient enough to make up the difference (Tilman, Cassman, Matson, Naylor, & Polasky, 2002). Farms that are using these highly extractive and exhaustive methods are larger-scaled commercial farms that are focused mainly on generating a profit at the expense of promoting an unsustainable society.

Pairing this information with the fact that small, locally-owned farms currently produce 70% of the world’s food suggests that a local food system is uniquely qualified to address the sustainability concerns in the agriculture industry (Wolfenson & Rome, 2013). A local food system has the potential to be connected to the heart of a community, allowing local farms to serve as catalysts for sustainability, setting an example for other industries and encouraging them to follow suit. Given the heritage and current disparities of the High Country in western North Carolina, which consists of Alleghany, Ashe, Avery, Mitchell, Watauga, Wilkes, and Yancey counties, small farms in this region have the ability to influence change and serve as role models for other rural communities throughout North Carolina and the country (“Welcome to the High Country, 2017).

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## *1.1 Research Questions*

The High Country of North Carolina is known for its abundance of natural beauty, boasting landscapes from lush forests to plummeting waterfalls. However, among all the natural wonder there is social turmoil lurking. Nearly one in five individuals suffers from food insecurity, and poverty rates exceed state and national levels, topping out at just over 21% compared to 17.2% for the state and 13.5% for the country (U.S Census Bureau, 2014; Feeding America, 2015; Proctor, Semega, & Kollar, 2016; Dukes & Leslie, 2014).

While there are welfare programs such as the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC), along with non-governmental organizations (NGOs) that provide food and shelter for those in need, there is still a lack of access to nutritional food, according to the Community Health Report for Watauga County (2015). This gap in nutritional food supply and demand is exacerbate the fight against preventable chronic diseases, such as heart disease and obesity, which affects over half the population (Appalachian District Health Department, 2015). Based on its own research, the Appalachian District Health Department (2015) identified three points of concern regarding community health: chronic disease prevention, management, and awareness; physical activity and nutrition; and substance use/abuse. Among the community members who

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participated in the survey, 68% expressed that poor nutrition and access to healthy food choices were among their top concerns for community health. As indicated by these survey results, it is clear that community members in the High Country not only want to find a solution to this plight, but also need a solution in order to ensure their future.

Now that the need for a local food system has been presented from both social and environmental standpoints, this paper seeks to provide a solution to the current dire situation in the High Country.

The research questions that need to be answered are:

- 1) What role does the local food movement in the High Country play in achieving a more sustainable food system?
- 2) How can a more sustainable business model platform for the local food movement in the High Country aid in the transition to a more sustainable food system?

This platform will encourage and enable the creation of more small farms that can not only provide access to healthy food for the community, but also stimulate the economy through job creation and cash flow. First, I have identified five core competencies that successful farms follow: 1) increased operational efficiency through adoption of technology, 2) diversification of products, 3) exploitation of new and current markets, 4) taking advantage of the value-added premium 5) and building capacity to scale growth. These core competencies are not inherently sustainable. Thus, it is important to implement them based off an economy that promotes sustainability. To ensure that local farms are creating a truly sustainable business model, I will discuss the circular economy and sharing economy which both center around creating sustainable economies.

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Apart from these required attributes, there are many obstacles facing small farm businesses in the High Country that can be overcome through innovation, a trait inherent to any sustainable business. By performing a basic SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis on the local farms interviewed for this project, I will identify these obstacles and ensure the platform is designed in such a way that innovation is encouraged and pursued.

### *2. Literature Review*

Over the past few decades there has been a noticeable rise in the local food movement, emerging from the concerns and failures of the industrialized food system (Aggestam, Fleib, & Posch, 2017; Sidali, Spiller, & Meyer-Hofer, 2016; Cantrell & Heuer, 2014; Farmer, Chancellor, Robinson, West, & Weddell, 2014). In response to this movement, research has attempted to explain and expound upon this shift, which has inevitably led to a myriad of theories and frameworks ranging from social justice, environmental stewardship, and economic growth (Kolodinsky, Pitts, Seguin, & Sitaker, 2014; Meas, Hu, Batte, Woods, & Ernst, 2014). While there are still many definitions for the local food movement depending on the context of a specific research project or business venture, there is an overarching theme emerging from the pursuit of local food: sustainability (Alkon, 2008; Dunn, Borawski, & Pawlewicz, 2014; Wittman, Beckie, & Hergesheimer, 2012). For the purpose of this thesis, the definition I have used to define the local food movement is a system of actions that allows for the unimpeded continuation of access to healthy, clean food for the entirety of a community (Dodds, Holmes, Arunsopha, Chin, Le, Maung, & Shum, 2014; Sbicca, 2015; Holland, 2016). This definition implies that in order for agriculture to be considered local it must also be sustainable. Sustainability is simply the act of enduring, and therefore encompasses environmental, social and economic impacts within a community. If agriculture is to be sustainable, it must be practiced in

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a regenerative way that builds up soil quality and biodiversity while avoiding use of synthetic additives and wasteful strategies. This philosophy requires that the farming practices used follow the principles of organic agriculture, first mentioned in the Report and Recommendations on Organic Farming (1980), which are defined as

A production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators, and livestock feed additives. To the maximum extent possible, organic farming systems rely upon crop rotations, crop residues, animal manures, legumes, green manures, off-farm organic wastes, mechanical cultivation, mineral-bearing rocks, and aspects of biological pest control to maintain soil productivity to supply plant nutrients, and to control insects, weeds and other pests (as cited in Dunn et al., 2014).

The International Federation of Organic Agriculture Movements' (IFOAM) definition offers support for this by stating that organic farming is “a production system that sustains the health of soil, ecosystems, and people. It relies on ecological process, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects” (as cited in Dunn et al., 2014, p. 56). For the purpose of this paper, the local food movement is defined as a food system focused on supporting the community in which it is grown, including both the production side and consumer side. This implies that local food is not strictly tied to a specific geographical location, rather it is based on the boundaries of a community. Lastly, it is important to note that while local farms have a commitment to produce organically, not all organic farms are committed to the local food movement (Dodds et al., 2014).

Now that the guiding principles of the local food movement have been defined, there is a lens through which the existing literature can be analyzed. This will set up the structure of the

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local food movement and give life to the principles laid out above. Reviewing the existing literature with these key factors in mind will also allow the gaps within the research to be identified. A solution can then be presented that will fulfill the need that exists within the local food movement.

### *2.1 Increased operational efficiency through adoption of technology*

The development of technology has been one of the key players in the industrialization of agriculture, with developments ranging from genetically modified organisms to automated tractor systems. While some of these technologies have led to unsustainable habits, there are other developments that have allowed for increased operational efficiency in the local food movement. Primarily, these focus on the adoption of the internet and software programs that assist with planning, production, and record keeping (Yadav & Misra, 2010). While the farmers interviewed for this thesis described these activities as crucial to their business' success, there is limited literature on this topic. According to Khanal, Mishra, and Koirala (2015), there was a direct correlation in increased farm revenues for those with access to the internet. This was evidenced in their research that compared the financial performance of local farms with access to the internet to those without access. They cited several reasons for this increase in revenue based on access to the internet. These reasons were related to new target markets, more information, streamlined business transactions, and access to more supplies (Khanal et al., 2015).

Accurately tracking production and record keeping, as well as labor inputs, is vital to ensuring that appropriate calculations are made when accessing profitability of a certain crop or market (LeRoux, Schmit, Roth, & Streeter, 2010 Silva, Dong, Mitchell, & Hendrickson, 2014). This, again, alludes to the importance of technology in data collection and recording keeping for local farms that want to ensure profitability.



### *2.2 Diversification of product lines to increase revenue and stability*

Mary LaLone, through her work at Redford University, has assembled a collection of interviews and historical documents that focus on community development in the Appalachian region of Virginia (LaLone, 2008). Her research on this topic has proven to be very insightful, as this region is similar to that of the High Country in North Carolina. In her publication entitled *Running the Family Farm: Accommodation and Adaptation in an Appalachian Region*, she compares the history of farming during the 1930's and 40's to practices embraced in the twenty-first century.

One of the core principles of farmers during the 1930's and 40's was the use of diversification. Diversification was implemented as a means of mitigating risk as well as ensuring self-sufficiency, and it included growing multiple crops, raising livestock and other animals, cultivating extensive kitchen gardens, processing and preserving food, and spreading holdings out over different geographical locations. Farmers in the Appalachian region of Virginia, as well as the High Country, are still practicing this strategy of diversification, with only minor adjustments accounting for technological innovations, deeper biological knowledge, and changing market structure. However, overall diversification is still one of the main tactics used to mitigate risk, both environmentally and financially (LaLone, 2008).

While the reasons for diversity in the mid-twentieth century centered around financial viability, ecological and biological diversity have now become main components of diversity, especially important to the local food movement. Ecological and biological diversity serve key roles in providing essential nutrients to crops, as well as in improving and maintaining soil quality on the farm (Galt, Sullivan, Beckett, & Hiner, 2012).

### *2.3 Exploitation of new markets and current markets*

The United States Department of Agriculture (USDA) published a report that found local food supply chains boast returns up to seven times greater than those realized in the conventional supply chain (Kolodinsky et al., 2014). Such returns in the local food supply chain are dependent on the different market channels being used by the farmer. Some of these channels will post large returns, as mentioned in the USDA report, and others, while offering smaller financial returns, have a higher return on the farmer's quality of life (LeRoux et al., 2010). This section will explore the different market channels currently available to local food communities, as well as some emerging market channels that are helping bolster the local food movement.

Each market has its positives and negatives, and each plays a crucial role in the economic viability and stability of local farms. Thus, diversity in market channels is a means by which risk can be minimized and stability can be created (LeRoux et al., 2010; Farmer & Betz, 2016). A review of the research suggests there are two main categories of channels within local food: direct and wholesale market channels (LeRoux et al., 2010; Farmer & Betz, 2016; Silva et al., 2014). Direct market channels are simply markets where farmer and final consumer are exchanging goods face-to-face. Wholesale market channels involve an intermediary (Kolodinsky et al., 2014; Farmer & Betz, 2016). The primary markets within the direct market channel are farmer's markets, farm stands and community supported agriculture (CSA). Wholesale markets include transactions between farms and some form of an intermediary such as restaurant, retailer, food hub or food delivery program (Farmer & Betz, 2016; Silva et al., 2014).

Taking a closer look into these markets further reveals the difference in price and volume associated with each specific market. The trade-off most commonly recognized between the two channels is typically high prices and low volume for direct channels, and vice-versa for

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wholesale channels. This theory also holds true for net revenue, according to the research conducted by LeRoux et al. (2010), in which they compared four local farms in New York.

However, other research has found that wholesale market channels not only have higher sales volume, but also offer higher net returns (Silva et al., 2014; Farmer & Betz, 2016). These differing statistics should not be alarming as there are many factors that contribute to sales volume and profitability, such as location, weather, and products. Farmers can use this information as reinforcements to emphasize the importance of market diversification, accurate record keeping, and data collection. Utilizing these practices, farmers will be able to make educated and competent business decisions.

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Market	Definition	Pros	Cons
<b>Farmer's Market</b>	"Two or more farmer-producers that sell their own agricultural products directly to the general public at a fixed location, which includes fruits and vegetables, meat, fish, poultry, dairy products, and grains." (Definitions of., 2016)	<ul style="list-style-type: none"> <li>• Highest price</li> <li>• Personal interaction with customers</li> <li>• High demand</li> </ul>	<ul style="list-style-type: none"> <li>• Time consuming</li> <li>• Beholden to weather</li> </ul>
<b>CSA</b>	"members support a farming operation by paying in for produce [among other farm product] in advance and receive a share fo the farm's produce in return..." (Galt et al., 2012)	<ul style="list-style-type: none"> <li>• Upfront cash early in the season</li> <li>• Pre-determined demand</li> <li>• Highest price next to Farmer's Market</li> </ul>	<ul style="list-style-type: none"> <li>• Back-end management</li> <li>• Obligation to fulfill certain products</li> <li>• Delivery</li> </ul>
<b>Food Hub</b>	"is a business or organization that actively manages the aggregation, distribution, and marketing of source – identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand" (Cantrell et al., 2014)	<ul style="list-style-type: none"> <li>• Access to customers</li> <li>• Minimal time commitment</li> </ul>	<ul style="list-style-type: none"> <li>• New to the High Country/underdeveloped</li> <li>• Fees</li> </ul>
<b>Restaurant</b>	"A place where people pay to sit and eat meals that are cooked and served on the premises." (Oxford Dictionaries, 2017)	<ul style="list-style-type: none"> <li>• Pre-determined product mix</li> <li>• Minimal time commitment</li> </ul>	<ul style="list-style-type: none"> <li>• Management demands</li> <li>• Lower price</li> </ul>
<b>Retailer</b>	"A person or business that sells goods to the public in relatively small quantities for use or consumption rather than for resale." (Oxford Dictionaries, 2017)	<ul style="list-style-type: none"> <li>• High quantity</li> <li>• Less variety demand</li> </ul>	<ul style="list-style-type: none"> <li>• Hard to meet the quantity required by retailer outlets</li> <li>• Can be hard to establish a relationship with</li> </ul>
<b>Wholesaler</b>	"A person or company that sells goods in large quantities at low prices, typically to retailers." (Oxford Dictionaries, 2017)	<ul style="list-style-type: none"> <li>• High quantity</li> <li>• Minimal time commitment</li> </ul>	<ul style="list-style-type: none"> <li>• Lowest price</li> <li>• Minimal outlets to work with</li> <li>• High quantity demand</li> </ul>

### ***2.4 Taking Advantage of “Value-added” Premium***

The underlying ideal of local food is ultimately the belief that it is providing an added value to life that cannot be obtained through conventional food systems. Even with the perceived notion that local food is more expensive, the demand has grown extensively. From 2002 to 2007, sales from direct-to-consumer agriculture increased 49% (Brian, 2012; Stobbe, 2016). The desire for local food is also evident from the explosion of farmer’s markets, which reached a total of 8,268 in 2014 (Stobbe, 2016).

This growing desire for local food arose from concerns over food safety, carbon emissions, and animal welfare (Dodds et al., 2013). Heightened awareness has given birth, or rebirth, to the local food movement with consumers now paying attention to where their food has been grown and under what conditions it is grown (Dodds et al., 2013). Connell, Smithers, and Joseph (2008) identified “quality, freshness, and being locally produced” as the most important factors among consumers at farmer’s markets. In fact, locally grown food was noted as being more desirable than organic food, simply because consumers feel eating locally has a greater positive impact on their communities (Dodds et al., 2013).

### ***2.5 Building Capacity to Scale Growth***

Building capacity is one of the most complex challenges facing the local food movement. There is a constant balancing act between furthering the reach of local food through scale up and maintaining authenticity, which is typically believed to be achieved only through face-to-face interaction between farmer and consumer (Wittman et al., 2012; Mount, 2012). Critics of the local food movement often cling to this issue as proof that a local food system is incapable of providing food security for the masses (Mount, 2012; Holland, 2016). The truth is that currently local food accounts for only two to three percent of all food consumed, which critics point to as

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the reason local food is insufficient. However, in their publications, Holland (2016) and Mount (2012) suggest that this has less to do with local farms' inadequacy and more to do with a lack of holistic development focused on building capacity in terms of the system as a whole, and not simply individual farms. By approaching capacity systemically, that is, building up internal as well as external elements, the local food movement will be able to satisfy a much larger percentage of communities around the world.

### ***2.6 The Circular and Sharing Economy***

Simply embracing the above core competencies will not make a farm business inherently sustainable, especially if these competencies are incorporated into a traditional business model that takes into account financial status above all else. Instead, these core competencies should be enacted under a sustainable business model that seeks to promote the fundamental beliefs of the local food movement. There are several sustainable economy theories in existence today, but the two that are most applicable to the local food movement are the circular economy and the sharing economy.

The circular economy provides a sustainable framework that is innately suited to meet the principles of the local food movement, especially when considering the natural attributes of farming. The Ellen MacArthur Foundation (2015) defines a circular economy as “an economy that is restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value at all times, distinguishing between technical and biological cycles” (p.2). A simpler and more common way of describing a circular economy is to think of it as a continuous loop where products undergo positive development throughout their lives, evolving from one form to another. By keeping materials and resources in use longer, the strain on natural resources is alleviated, waste is minimized, and risk is reduced. This is in

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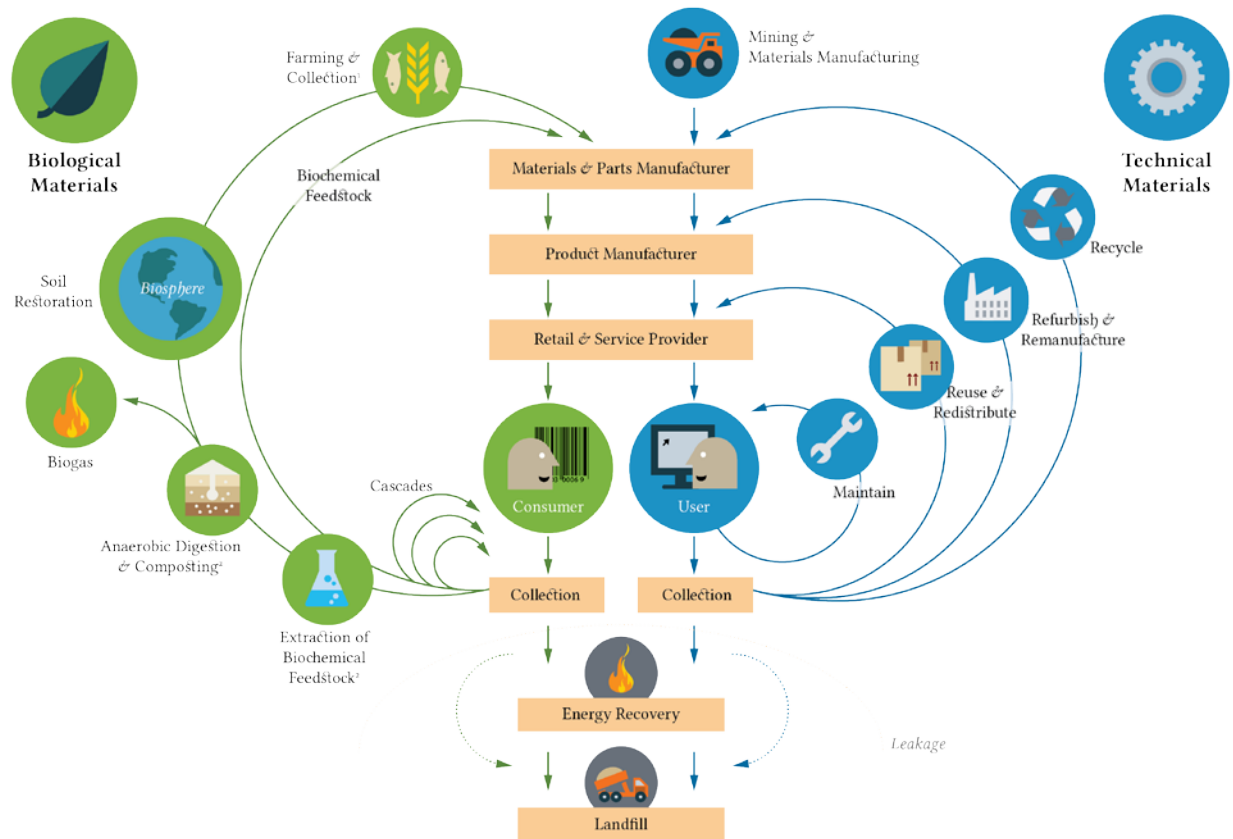
comparison to the current “take, make, waste” consumption habits of society that are linear in nature. By transitioning to a circular economy, the local food movement will be able to become more stable and resource efficient, as well as less harmful to the earth and its inhabitants.

In order to better understand the business model, it is necessary to clearly outline the fundamental activities of a circular economy. The three key activities are preservation and enhancement of natural capital, optimization of resource yields, and advancement of system effectiveness (Ellen Macarthur Foundation, 2015). In addition to understanding these three principles, it is also crucial to understand the two cycles of a circular economy that were briefly mentioned above. The biological cycle asks how products and packaging can be designed to decompose, allowing the material to return to the earth (Murray, Skene, & Haynes, 2015). The technical cycle looks at the non-decomposable components of a product and analyzes how they can be recycled and renewed into future products (Murray et al., 2015).

Agriculture is a flowing, circular system in which organisms live, die and replenish continuously. Because of these natural characteristics, farming production has the ability to efficiently revert back and adapt to the circular economy. However, careful thought must be given as to how the other business practices of a small farms, such as input procurement, labor management, and product distribution, can become circular in nature. This demonstrates the importance of incorporating the sharing economy into the local food movement. Muñoz and Cohen (2016) define the Sharing Economy as “a socio- economic system enabling an intermediated set of exchanges of goods and services between individuals and organizations which aim to increase efficiency and optimization of under-utilized resources in society (p. 1)” The sharing economy has the ability to not only create new business ventures within the local food movement, but also to allow farms to create a community-centered approached to scaling

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the movement. These theories will be put to action when the business model is being established, but it is important to understand the definitions of the two economies and how each will enable the local food movement to achieve greater sustainability.



(Ellen Macarthur Foundation, 2015).



### *2.7 Summary of Literature Review*

Existing literature on the local food movement has identified the core competencies required by farms choosing to become a part of the movement. It is evident that the importance of technology, the benefits of having diversified products and markets, the value addition of local branding, and the use of finance to grow capacity cannot be overstated. However, this literature fails to shed light on the gap between the ideals of the local food movement and the required steps to launch, run, and maintain a local farm. To fill this gap, I propose the adoption of the following business model, developed by merging the academic research above with the existing business strategies of eight High Country farm businesses who were interviewed for this project.

## *Chapter Three – Method*

### *3.1 Survey*

For this research, I contacted the Executive Director of Blue Ridge Women in Agriculture (BRWA). This non-profit organization is located in the High Country of North Carolina and provides services such as training programs, grant funding, and business planning to local farms. After speaking with the Executive Director and discussing the current landscape of farming in the High Country, we were able to identify the need for business guidance for farms there. I then composed a proposal and research question, which I reviewed with the Executive Director to make sure I would address the difficulties related to business operations at these farms. After a few iterations, the Executive Director confirmed that this topic would be of use to High Country farmers. She then provided me with a list of ten farmers that were involved with BRWA. Eight of those ten farmers agreed to participate in my study and of those eight, five completed the pre-interview survey. Three declined for unspecified reasons.

The commitment required a pre-interview survey of general farm information such as products, markets, and income, and an in-person interview that lasted approximately one hour. The surveys were sent out via email one week prior to the scheduled interview, and were requested back one day before the interview. The interviews took place at the farmer's farm and were voice recorded and then transcribed verbatim. Questions on the interview guide were created based on the information gathered from the literature review, input from two professors, one with expertise in local food systems and the other in sustainable business, and from the advice of the Executive Director of BRWIA. The survey questions and interview guide are attached to the Annex of this paper. After the interviews were transcribed, I then used them to

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perform a SWOT analysis, which allowed me to fully access the current conditions of the local food movement in the High Country.

### *3.2 Survey Results*

Age	Income	Farming as an Occupation	Product Mix	Market	Hire Employees
32	\$75,000 or Greater	5-10 years	Vegetables, meat	Farmers Market, CSA, Restaurants , and Retail	Yes
41	Less than \$25,000	5-10 years	Fruits, vegetables	Farmers Market, CSA, and Restaurants	Yes
39	\$25,000-\$35,000	5-10 years	Fruits, vegetables, meat, molasses, cornmeal, sorghum meal, dried hot peppers, dried garlic, and dried mushrooms	Farmers Market, CSA, Restaurants, and Wholesale distributor	Yes
52	\$25,000-\$35,000	< 5	Fruits, vegetables, eggs, honey, pickles, arugula pesto, and candles	Farmers Market, CSA, and Restaurants	Yes
61	\$75,000 or Greater	5-10 years	Dairy, meat, cheese, fudge, and caramel sauce	Farmers Market, Restaurants , and Retail	Yes

### *3.3 SWOT analysis*

To better understand the current environment of the local food movement in the High Country, the interview and survey questions were used to conduct a SWOT analysis. This allows for the identification of the various strengths, weaknesses, opportunities, and threats of the local food movement. The four sections of the SWOT analysis are broken into two parts: internal and external. Internal qualities include strengths and weaknesses and external qualities include opportunities and threats. Strengths are the internal aspects of the local food movement that separates them from other competitors, giving them a competitive advantage. Weaknesses are the internal activities for which the movement does not have a sturdy grasp and could prove to weaken the overall mission if not addressed.

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Opportunities are external forces that, if acted upon, can provide the movement with a stronger competitive advantage. Threats are external forces that could have negative impacts on the movement, hindering its competitive advantage or significantly limiting its potential. It is important to note that opportunities, as well as threats, are typically out of the control of the entity that is being analyzed, in this case the local food movement. Likewise, the strengths and weaknesses should be viewed as activities in which the entity engages, either knowingly or unknowingly. To begin, I will look at the strengths identified from the research conducted.

### ***3.3.1 Strengths***

#### ***Knowing the why and what***

The ability to clearly define and set the vision for your enterprise is a crucial aspect of business ownership. When asked about why they chose to go into the farming occupation, every farmer had a specific event or instance in his or her life, whether it was a gentle nudge or a forceful push, that made their path clear. One farmer stated, “He [my father] just dropped me... basically dropped me off at the honeybees. I just remember standing there in the middle of nowhere...and something just triggered in me.” Another farmer was led to full-time farming by his wife and his passion to eat healthy, clean food. Because the couple was on a tight budget, it meant growing it themselves. Translating their passion into a plan was a defining characteristic of each farmer. Whether it was to provide artisan pickles and pesto or simply ensure their community had access to healthy food, each farmer knew what they wanted to do and why.

#### ***Understanding the customers’ needs***

There was a continuous theme for all the farmers when asked about managing their customers’ expectations, and it was all based on the relationships they had established. While each farmer may not know every single customer who purchases from them at the weekly

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farmer's market, they have developed enough relationships over time to know what their customers desire and how to fulfill that expectation. For example, one farmer who sold to several restaurants in the area stated that she has a strict ordering process that she has her chefs follow. The chefs have responded positively to that because they are disciplined individuals who want to know they can rely on their food suppliers. Another farmer said he believes it is simply about maintaining an open line of communication with customers so trust can be established.

The commitment to the customer, however, does not always pay off. For example, there may be a crop that does not offer a lot of return on investment from a financial standpoint. Because the customer expects it in their CSA box, though, the farmer provides it. This faithfulness has led to a 90% customer return rate for their CSA.

### *Security through diversity*

Of the eight farmers interviewed, seven produced at least, and in most cases more than, four different farming enterprises, ranging from goat cheese to Thanksgiving turkeys. This market spread has allowed the farmers to establish some security despite risks such as poor growing conditions, disease, and pest infestations. While this diversity has provided the farmers with a sense of security in their markets they have also been aware of over-diversification, which can lead to reduced quality and a loss of efficiency. All farmers, however, achieved diversity in their markets to create a balance in harvesting, time management, and profit margins. Having multiple markets such as farmer's markets, CSAs, restaurants, and wholesalers mitigates the risks associated with market failures, such as a bad weather during a farmer's market or restaurant closures.

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### *Using data to create efficiency*

Not every farmer had the same methods for tracking, recording, and analyzing their production process, but every farmer was meticulous about generating this information. Having explicit details about all activities allowed each farmer to understand his or her inputs and outputs and make adjustments accordingly. Because most of these farms are one or two man operations, with the exception of seasonal help, having a clear understanding of the hourly, daily, weekly, monthly, and yearly tasks is crucial to ensuring the health of the soil, quality of the production, and profitability of the farm.

### *3.3.2 Weaknesses*

#### *Labor*

Small-scale farming operations such as those typically seen in the local food movement are highly labor intensive enterprises, and thus require a significant amount of human labor. While there are technologies that have made farming more efficient, most local farms do not operate at a large enough scale to utilize these. Many critics of the local food movement believe that because small farms cannot take advantage of these high-tech offerings, they are obsolete. However, through proper management of local farms, this is in fact a strength to the movement because it has the potential to provide satisfying employment in the community. In the context of this paper however, it was identified as a weakness by many of the farmers interviewed for three reasons: seasonality, compensation, and management. No matter the scale, agriculture is a largely seasonal industry and that cannot be easily overcome. This leads farmers having to hire new help almost every season, bringing with it the costs of onboarding new employees, training, trust building, and the like.

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Among the farmers interviewed, there were two main ways that farmers chose to compensate their employees: internships/apprenticeships and hourly wage team members. The farmers with an apprenticeship platform believed they were able to compensate their interns with a knowledge building experience, equipping them to advance their agriculture careers. However, many feel that not paying employees at least at minimum wage not only goes against the idea of sustainable agriculture in terms of social justice, but is also an indicator that a business may be inherently flawed.

Labor management in the context of local farming in the High Country is referring not to how employees are managed, but rather to how labor is utilized and measured on the farm. For example, in order for a farmer to be able to identify the profitability of a certain product, they have to be able to track the inputs and assign them a value. In farming, this can be difficult to accurately account for both in planning and execution. Poorly managed labor can lead to a loss in productivity, decreased income, and inaccurate planning.

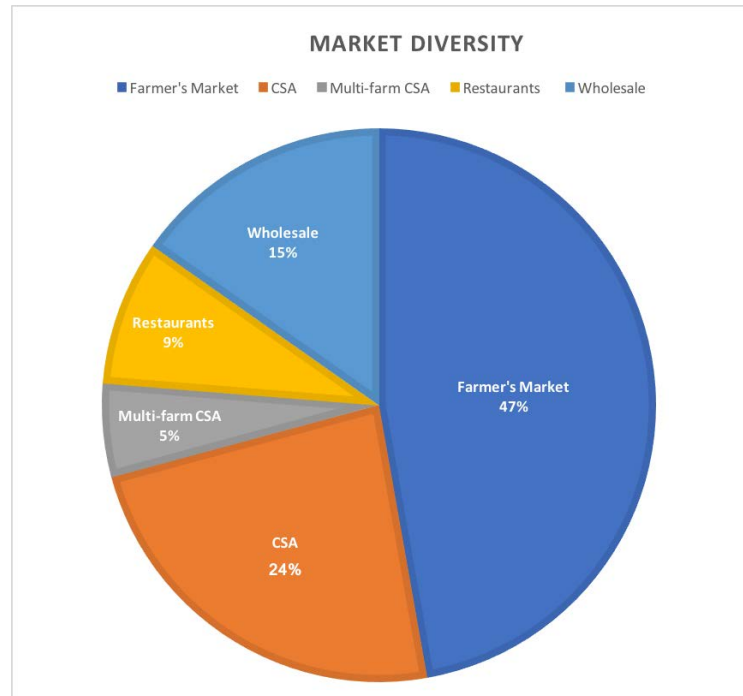
### ***Grants***

Fundamentally, grants have the potential to be a very effective and beneficial tool when used properly and within the context of their design. It is important to note that of the eight farmers interviewed all but one has taken advantage of a grant at some point in their farming career. That being said, there were many who felt that the over use of grants would, in the end, be a detriment to many farms who were using them to fund their operations. Grant dependency can also lead to financial manipulation where a farmer believes an investment or project is doing very well until the grant money is no longer available and the project fails.

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### *Market diversity*

Being present in multiple markets does not mean an operation is necessarily diverse. To ensure true market diversity, farmers should avoid having the majority of their revenue stream dependent on one market. In many cases, the farmers interviewed said 50% or more of their revenue came from one singular source. This leaves them vulnerable and at risk of not being



able to absorb market disruptions, which could, in turn, significantly cripple their businesses.

### *Accounting and information management*

All of the farmers who participated in this research had a very clear understanding about the importance of record keeping, even though they all had different practices and procedures. However, one thing that was lacking was a consolidated database that allowed the farmers to perform all of their record-keeping through one program that could then help them analyze all of their data and then allow them to plan their production. Efficiency is the defining factor between farms that are profitable and those that are not. Therefore, being able to input hard data and produce meaningful and useful results promptly is crucial. Because these farms are operating in the technology age, the farmers need to be leveraging that technology to ensure they have a competitive business.



### *Marketing*

The proper implementation and use of marketing can help farmers create a brand and differentiate themselves from one another. Unfortunately, many local farmers are not afforded the opportunity to spend their precious and fleeting time on these tasks that do not offer a direct increase in sales. When asked about marketing, most farmers stated that they relied on face-to-face conversations and word of mouth, and they all, although somewhat begrudgingly, try to use social media to promote their farms. This lack of strategic marketing can leave farms with no distinguishable identity, ultimately hindering their growth and damaging their competitive advantage.

### *3.3.3 Opportunities*

#### *Growing demand*

The greatest opportunity for the local food movement is without doubt the growing demand it has experienced over the past decade. To take full advantage of this growth, farmers in the High Country will need to look to surrounding markets such as those in Winston-Salem, Hickory, or even Charlotte, North Carolina. All of these are within a hundred miles of the High Country. These markets, especially Charlotte, have higher population density, creating more market opportunities with restaurants, farmer's markets, and even CSAs. Expanding to these markets could also be done through farm collaboration, a process by which farms bundle their products, giving them the scale required to be competitive sellers to natural food retailers. Another potential market to exploit is the development of a food hub, which the town of Boone just recently opened. Food hubs provide farmers with a centralized location to store, market, and sell their products off the farm.

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### *Product development*

Growing demand is also giving farmers the opportunity to expand their own product lines and scale their operations. With solid strategic planning, farms can leverage the growth in demand to help them launch new enterprises, such as value-added products, livestock, farm tourism, and training programs. For example, one farmer has built what she calls the “party barn,” the original homesteaders cabin that has been modified to include a brick pizza oven. Guests can make their own pizza, using the pizza kits made from farm fresh ingredients, after they have taken a tour of the farm. Other farmers host “open farm days” where community members can come work on the farm to learn and experience how food is grown. Many of the farmers are also active in the Blue Ridge Women in Agriculture program and lead seminars on different farming skills. All of these opportunities have the potential to add tremendous value to the local food movement in the High Country.

### *Data management*

The topic of data collection and analysis has been discussed in both of the previous sections, and that is for good reason. Through recent developments in technology, the ability to leverage data analytics is becoming more cost effective and has the potential to significantly increase the efficiency of the local food movement. Proper use of data can allow farmers to pinpoint the profitability of a crop by seeing their inputs and outputs almost instantaneously. The potential benefits of a consolidated, collaborative software database that provides farmers with a single place to handle all of their planning, production, harvest, and accounting could prove invaluable to the local food movement, especially in the hands of a skilled and knowledgeable farmer.

### ***3.3.4 Threats***

#### ***Demographic and geographic barriers***

The High Country has served as a haven for city dwellers all over the country for decades, providing refuge from the chaos and commotion of life in a metropolitan arena. The serenity and seclusion that draws so many to this place, may also pose a threat to the local food movement for several reasons. First, as its popularity with second-home owners' increases, so does land value, creating an issue for aspiring farmers who may not have access to large amounts of capital. This is barring many prospective farmers from locating near the more densely populated towns. This leads to longer travel times for both farmers and consumers. Second, the rurality of the High Country means that the capacity of the market is reached sooner and with fewer farms than in larger more highly populated areas. This is a reality that many farmers interviewed already see, as they are selling out their products at a slower rate than in years past. No farmer, however, felt that their overall sales have declined because of this market saturation. Third, as more and more young people relocate to urban settings, rural communities are experiencing a shortage of individuals to fill vacancies in the community. This is particularly true of the agriculture industry where the current average age for a farmer is over sixty.

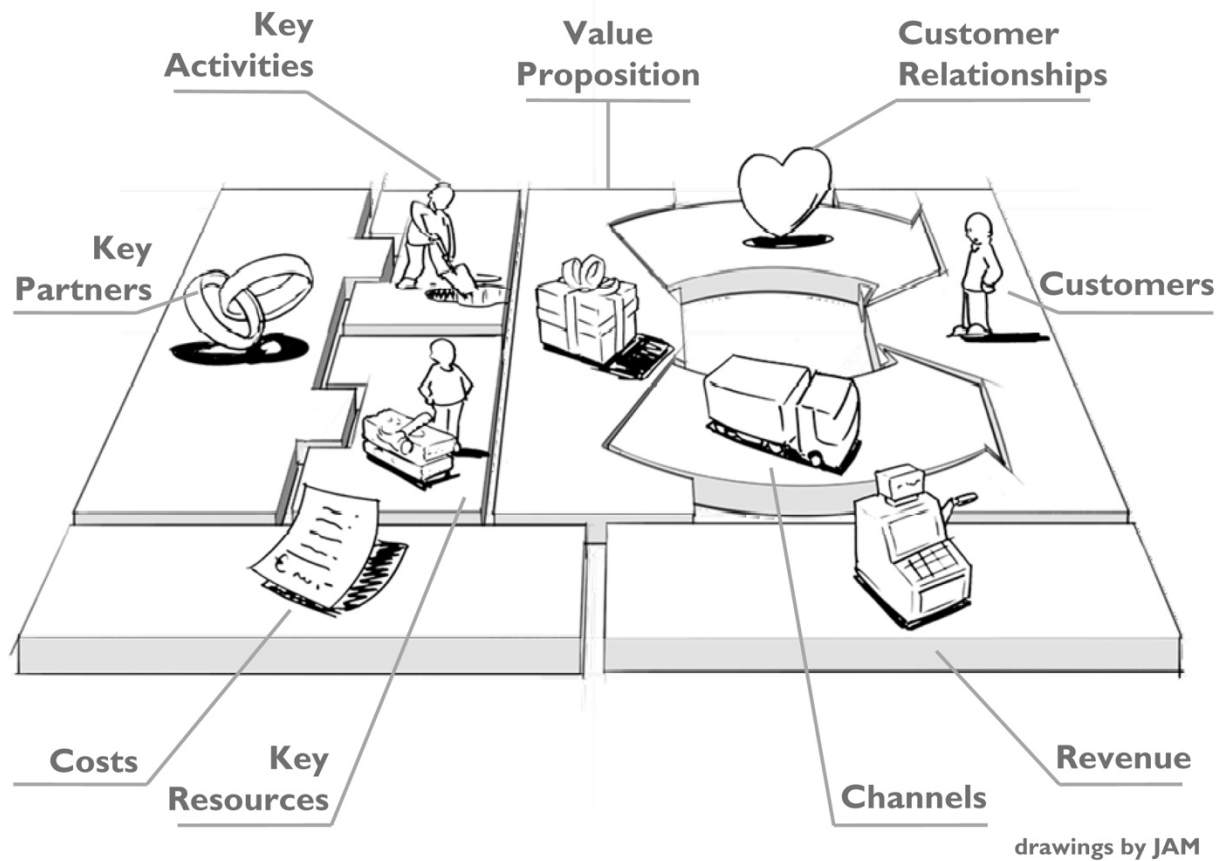
#### ***Weather and climate change***

Weather has always posed a threat to farmers. However, over the past decade, farmers have been exposed to more and more unpredictable weather patterns that are disrupting the normal cycles of their farms. While they all understand that weather is an unavoidable risk, every farmer interviewed expressed concern with its ever-growing unpredictability.

### *Undervaluation of food*

The local food movement is a values-based movement that seeks to promote health holistically by providing clean food in a socially and environmentally positive manner. Thus, the current attitude toward food in society at large is a direct threat to this movement. People put more value on convenience than they do on quality, consuming whatever food can be obtained for a low price, quickly. This attitude has led to a rise in healthcare costs and a decrease in quality of life. For the local food movement, it will make scaling and growing a challenge, as participants will not only have to be responsible for providing healthy food, but also for serving as advocates for the movement, promoting the benefit and necessity of eating well.

*Chapter Four – Defining the Business Model*



(Osterwalder &Pigneur, 2010)

The term “business model” is often tossed around in conversations with entrepreneurs and business professionals, yet the definition is seldom discussed. Most of the time, it is used interchangeably with countless other business jargon. A business model is simply the “rationale of how an organization creates, delivers, and captures value” (Osterwalder &Pigneur, 2010, p. 14). This is different than a business plan, which is “a written document describing the nature of the business, the sales and marketing strategy, and the financial background, and containing a projected profit and loss statement” (“Business Plan”, 2017).

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Business plans are more rigid and do not allow for the fluidity of thought and evolution like a business model approach does. This can be seen especially in the business model canvas theory developed by Alexander Osterwelder during his PhD studies. The business model canvas provides a visual breakdown of the nine fundamental building blocks of any organization, allowing the entrepreneur to clearly understand and define their processes. The nine blocks are customer segment, value proposition, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure (Osterwalder & Pigneur, 2010). In this section each of these pieces is discussed, how one interacts with the next, and what each one may look like for a local farm in the High Country.

### ***4.1 Customer Segments***

A customer segment is a specific group of the population to whom an enterprise is trying to deliver their value proposition. This can be both individuals and organizations (Osterwalder & Pigneur, 2010). Customer segmentation occurs as different needs requiring different services are recognized, separating one group from another. Every customer segment will be reached through different distribution channels or relationships, creating varying profit margins based off their willingness to pay.

There are segment strategies an enterprise can utilize such as mass, niche, segmented, diversified, and multi-sided. Based off the research on local farms in the High Country, viewed in light of the SWOT analysis, the most appropriate strategy is the segmented market strategy. The segmented market strategy is centered around having several customer segments to which the enterprise can provide value. For example, there are four distinct segments currently being exploited in the High Country: individuals, chefs, wholesaler, and retailers. In addition to these four market segments, farmers should look to customers who can participate in an exchange of

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goods or services that are not fully utilized. One example of this could be local businesses that have waste, such as spent grain from micro-breweries or excess whey from cheese making, which can serve as feed or fertilizer. This not only generates additional cash flow, but also promotes a circular economy. Each one of these markets represents a different group of people who are willing to pay different prices based on their needs, offering different profit margins to the farmers (Osterwalder & Pigneur, 2010). It is very important that each customer segment is clearly defined. What are their needs? What are their motivators? How are they different from other segments?

### ***4.2 Value Proposition***

The value proposition explains to the customer what the enterprise is doing and how it offers them value (Osterwalder & Pigneur, 2010). It should communicate the services or products offered in a manner that demonstrates the ability to satisfy customers' needs better than anyone else. There are countless different strategies on how to define a value proposition, but ultimately it comes down to understanding the product being offered and the customer it is being offered to at a fundamental level, so the value can be clearly defined. In the case of the local farm, the value proposition will be different for each farmer, and within that, different for each customer segment.

There is much value offered by the local food movement, such as healthy, clean, and safe food; a deeper connection to the community; more sustainable approaches to living; superior quality products; consistent and reliable flavor; and tailored products to fit a need. This aspect of the business model canvas is highly personal to the firm and should be something that reflects its personality. Each customer segment may require a value proposition that targets their needs, even if the product being offered is the same for all segments (Osterwalder & Pigneur, 2010).

## 4.3 Channels

Channels are the methods used to communicate with the customers, and include activities such as raising brand awareness, conveying the value proposition, selling the product, delivering the value proposition, and ensuring customer support post-purchase (Osterwalder & Pigneur, 2010). Osterwalder and Pigneur have defined two types of channels: owned and partner. Owned channels are those that involve direct interaction or contact with customers. For example, farmer's markets and CSAs allow customers and farmers to have a personal connection. Partner channels are typically indirect channels, such as wholesalers, retailers, and restaurants within the local food movement. Bolstering partnership channels, especially in the form of product delivery, can help alleviate the burden of market delivery and also reduce emissions from transportation. Organizations should consider using a balance of channels in order to create an exceptional customer experience and maximize revenues (Osterwalder & Pigneur, 2010). At times, this can be a trial and error game and requires careful analysis of data in order to ensure optimization.

Channel Types		Channel Phases				
Sales Force		1. Awareness	2. Evaluation	3. Purchase	4. Delivery	5. After Sales
Own	Direct					
	Web Sales	How do we raise awareness about our company's products and services?	How do we help our customers evaluate our organization's Value Proposition?	How do we allow customers to purchase specific products and services?	How do we deliver our Value Proposition to customers?	How do we provide post-purchase customer support?
Partner	Indirect					
	Partner Stores					
	Wholesale					

(Osterwalder &Pigneur, 2010)



### ***4.4 Customer Relationships***

This block simply looks at and defines what type of relationship an enterprise wishes to create with a specific customer segment (Osterwalder & Pigneur, 2010). There are many different key drivers behind customer relationships, such as acquisition, which is the act of bringing in new customers; retention, which is working to retain existing customers; and upselling, which is encouraging customers to purchase more products. To achieve these objectives there are several different strategies that can be implemented, such as personal assistance or human interaction, self-service, and communities. The farmer's market is an example of personal assistance where customers have the face-to-face interaction they desire. On the other hand, chefs may not require this intimate relationship and, instead, are looking for consistency and reliability. Strong customer relationships are built on the understanding an enterprise has regarding the customer segment and how their value proposition fulfils the needs of that segment. Farmers have to approach each segment in a way that is specific to that segment in order to create the type of relationship desired by the customer.

### ***4.5 Revenue Streams***

Revenue streams are the ways in which a company generates cash flow, allowing it to become a viable business (Osterwalder & Pigneur, 2010). A company must discover the price that each customer segment is willing to pay, and then formulate a plan to extract that worth from the customer in a way that continues to supply value to the customer and generate revenue for the firm. There are two distinct forms of revenue streams: transactions and recurring. The first is a one-time payment that results in the exchange of a product or services for a set price. The latter is an ongoing payment that delivers a value proposition or offers some form of post-purchase support.

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Once the revenue type has been determined, it is then time to decide how that stream will be produced. The two most prominently used methods based on the research conducted above are asset sales, which are simply the exchange of ownerships rights on a product, and subscription fees, which are generated through the commitment to deliver a product or services throughout the allotted subscription period (Osterwalder & Pigneur, 2010). Another potential revenue stream that the local food movement should consider using, especially at farmer's markets and food hubs are government subsidies programs, such as SNAP and WIC. While this stream does require a good amount of up-front administrative work and capital investment from equipment, there is a significant upward trend in revenue coming from snap participants, with sales jumping from \$4,173,323 in 2009 to \$16,598,255 in 2012 (King, M., Dixit-Joshi, S., MacAllum, K., Steketee, M., & Leard, S., 2014). Revenue streams do not always have to come from standard product or service exchange. As discussed in the sharing economy, revenue can come from under-utilized assets. One form this may take is in land sharing, where land owners who either do not farm at all or have unused portions of their farm enter into an agreement with an aspiring farmer. This allows the land owner to receive potential tax benefits and cash flows, while also reducing the need for new farm land at the expense of clearing forests. Each channel may utilize a different revenue stream, but it is crucially important that the firm recognize the different amounts that each customer segment is willing to pay.

### ***4.6 Key Resources***

Every enterprise has a set of resources that are used in order to create the value proposition (Osterwalder & Pigneur, 2010). These key resources are divided into four categories: physical, intellectual, human, and financial. In terms of local farms, physical resources are land, farm infrastructure, tools and equipment, and seeds. Intellectual resources are intangible items

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that are often hard to develop, but when successful, can add tremendous value. For local farms, this refers to branding, but can extend to proprietary knowledge, patents and copyrights, partnerships, and customer databases (Osterwalder & Pigneur, 2010). Human resources are the knowledge- based resources that the farmers and laborers provide, such as knowing when to plant, fertilize, weed, water, and harvest. Because farming is as much an art form as it is a science, human resources are invaluable to ensuring the success of the enterprise. Lastly, there are the financial resources that are required in order to purchase the needed inputs. Building up a credit line and using it in the proper manner can alleviate the financial strain farmers often experience at the beginning of the season when there is little to no cash flow. There is a big opportunity within the exchange of knowledge and information that, if developed, could prove to be a huge asset to the local food movement. The sharing of planting schedules, pest problems, harvesting techniques, and other types of pertinent information would allow local farmers to work together in promoting not only their own products, but also the local food movement as a whole.

### ***4.7 Key Activities***

The activities on which the enterprise depends and without which it cannot exist are the key activities of a business model (Osterwalder & Pigneur, 2010). Key activities are typically categorized as production, problem solving, and platform/network. This is an interesting block because farms typically fall into the production categories as they are producing physical products to sell. However, local farms are dependent on the local food movement, which is a platform used by local farms to generate demand. It is important to take a holistic look at the industry of which an enterprise is a part, in order to understand all of the activities required for success. To continue toward sustainability, farmers should adopt key activities that promote the

principles of the circular and sharing economy. Such activities could be partnering with other local farms to promote the movement, better utilizing resources, and fully committing to the sustainable and organic techniques discussed in the literature review.

### ***4.8 Key Partnerships***

All companies require partnerships in order to create their value proposition. This is especially true for local farms that depend on strategic alliances with other farm businesses in order to create demand (Osterwalder & Pigneur, 2010). Partnerships are also required in order to meet the needs of customers. For example, the multi-farm CSA requires inputs from several farms, all offering different products, in order to satisfy the needs of an entire segment. The farmer's market would not be able to operate if there was only one farm participating. It takes the cooperation of other farms to supply enough value proposition to meet the demand. The exchange of knowledge within the local food movement allows farmers to collectively address any issues or disruptions that farms may be experiencing from pest infestations to supplier problems.

### ***4.9 Cost Structure***

Defining the cost structure requires first being able to account for the costs incurred through the creation and delivery of value (Osterwalder & Pigneur, 2010). This should highlight the importance of clearly defining the other blocks, which will allow for an easier understanding of the major cost in a business model. The major cost incurred by local farms are land acquisition and infrastructure, with other more minimal costs incurred from input procurement, labor, and marketing. As revealed in the SWOT analysis, local farms depend on efficiencies within their production, allowing them to reign in unnecessary cost and achieve profitability.

***4.10 Business Model Canvas for the High Country***

The business model canvas is a visual tool, and to take full advantage of its value, it needs to be viewed as a fluid illustration. This will provide the means to view how each block interacts with the others and understand the implications one decision has on the rest of the business model. The following examples can be used as a lens through which farmers can view their enterprise.

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# The Business Model Canvas

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### *Chapter Five – Conclusion*

The commercialization of agriculture has proven to be detrimental not only from an environmental standpoint with greenhouse gas emissions soaring, deforestation devastating ecologies, and harmful pesticides and fertilizers poisoning ground water and killing wildlife, but also from a social standpoint with a rise in child labor, poor living conditions for workers, loss of nutritional value in food, increased food contamination, and increased diet-related chronic illness. Financially, there are a select few who have profited from this shift toward commercialization, but many family farms have closed, perpetuating unemployment throughout the local farm and horticulture industry. As these negative effects have become increasingly prominent and awareness of the importance of healthy, clean, and fair food rises, the local food movement has continued to grow in popularity.

The demand for local food is based on the consumer's desire to know more about what he or she is eating, both for personal physical health and for the health of the environment and community. Farmer's markets alone have seen an exponential increase in new locations and revenue, not to mention the birth of many new local food retailers like the food hub. However, the market is still very competitive, and small local farms are being met with competition from commercial food businesses. These companies are able to reach lower price points and use their market share to promote "sustainable washing" of products, leading consumers to believe they are making better choices, when in fact, these claims of sustainability are easily disproven.

In order to maintain their competitive advantage and remain a viable business, there are five core competencies that local farms need to embrace: 1) increased operational efficiency through adoption of technology, 2) diversification of products, 3) exploitation of new and current

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markets, 4) taking advantage of the value-added premium 5) and building capacity to scale growth. The literature review conducted for this thesis led to the discovery of a gap between the demand for the local food movement and what needs to be done to operate a successful local farm.

To address this gap, interviews were collected from eight local farmers in the High Country that sought to identify the strengths, weaknesses, opportunities, and threats present to these farms. The SWOT analysis helped establish the techniques and strategies that farms in the High Country implemented in order to be successful. The Business Model Canvas theory was then presented as a recommendation for small farms who can utilize this concept to ensure they have a thorough and accurate understanding of their business. Using the information gathered from the research, an example business model was prepared and discussed in detail. The goal for this thesis is to introduce local farmers in the High Country to the fundamental business tools associated with a sustainable business. Through demonstrating how a SWOT analysis is performed, farmers will be able to conduct the analysis on their own farm. This analysis can then be translated onto the business model canvas where the specific details of their farm can be identified. This paper will properly equip farmers to build a business that can meet the current and future demands of society not only the High Country of North Carolina but also the country.



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## Appendix A

### Pre-interview Survey

#### SOCIO-DEMOGRAPHICS

1. What is your full name?
2. What is your age?
3. To which racial or ethnic group(s) do you most identify?
  - 1) African-American (non-Hispanic)
  - 2) Asian/Pacific Islanders
  - 3) Caucasian (non-Hispanic)
  - 4) Latino or Hispanic
  - 5) Native American or Aleut
  - 6) Other
4. What is your marital status? (Circle the option)
  - 1) Married
  - 2) Single
  - 3) Divorced
  - 4) Have a partnerOther: \_\_\_\_\_
5. What is your highest level of education reached?
  - 1) Primary Education (through Middle school)
  - 2) High School
  - 3) Bachelors
  - 4) Masters
6. What is your total personal income from the farm?
  - a. Less than \$25,000
  - b. \$25,000-35,000
  - c. \$35,000-50,000
  - d. \$50,000-75,000
  - e. More than \$75,000

#### Farm Information.

1. How long have you farmed as an occupation?

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- a. Less than 5 years
  - b. 5-10 years
  - c. 10-20 years
  - d. more than 20 years
2. Do you own your farm?
  - a. Yes
  - b. No
3. If applicable, do you rent or lease your farm?
  - a. Yes
  - b. No
4. What types of products do you have?
  - a. Fruits
  - b. Vegetables
  - c. Dairy
  - d. Meat
5. Do you offer value added products (jams, pickles, cheeses, etc.)
  - a. Yes
  - b. No

i. If yes, please list items:


6. Do you have any employees or hired help?
  - a. Yes
  - b. No
7. How many hours a week do they work?
  - a. Full-time (36 or more)
  - b. Part-time (less than 36)
8. What markets do you currently participate in? check all that apply
  - a. Farmers Market
  - b. CSA
  - c. Restaurants

d. Retail

**Interview Guide**

Farm Background

SCRIPT: Thank you again for agreeing to meet with me and discuss your farm. To begin if you can just state your name and the name of your farm.

SCRIPT: Can you tell me your story about how you began farming, what some of the biggest learning curves were and where you see your farm going in the future.

1. Why did you decide to farm?
2. How did you get into farming?
3. What is unique about your farm? How have you set yourself apart from other farms in the area
4. How did you decide what type of farm you wanted to have? (i.e. what kind of crops you wanted to grow, livestock you wanted to raise)

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### Business Practices

SCRIPT: I am curious about learning the daily activities of your farm and the processes and procedures you employ on a daily basis. I am sure you are familiar with the supply chain but essentially what I am looking to figure out is what the individual activities are that make up the overall chain of your farm. For example, where do you purchase your seeds, how to you apply fertilizer, what system do you have in place for irrigation, where do you get supplies, and how you harvest and store your products.

1. Can you walk me through the steps of a typical season from acquiring seed to sale?
2. What activities require the most time on the farm?
3. What activities do you feel are the hardest?
4. What activities do you feel are the most inconsistent?
5. How do you handle quality control?
6. On average, do you over produce or under produce? If over, what do you do with the excess product? If under, by how much do you under produce? Is that intentional?



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### Markets

SCRIPT: This leads me to my next question regarding markets and how you handle the customer service side of you farm.

1. What procedures do you have in place to manage the markets?
2. What makes it hard to sell at these markets?
3. How do you handle customer's expectations and grow that relationship?
4. Do you do any type of marketing or advertising? If so, what? If not, why?

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### Record Keeping

1. What current methods do you have in place for recording your production? Planted vs harvested? If you are comfortable, would you mind sharing this with me?
  
2. What current methods do you have in place for recording your costs? If you are comfortable, would you mind sharing this with me?
  
3. What current methods do you have in place for recording your sales? If you are comfortable, would you mind sharing this with me?
  
4. What current methods do you have in place for recording your profits? If you are comfortable, would you mind sharing this with me?
  
5. How do you handle your accounting/bookkeeping?

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### Regulations and Taxes

SCRIPT: I would like to discuss the regulations and taxes with you, in the time I have spent research all the guidelines and stipulations I have notices how overwhelming it can be to try and organize all the information.

1. How did you first start learning what regulations apply to you, how to implement them, and how to abide by them?
2. What methods to you use to monitor and track regulation?
3. What are the biggest obstacles with currently regulations? How do you overcome them? How have they inhibited your success? Or, how have the enabled your success?
4. Do you have systems in place to manage your tax obligations? (Accountant, QuickBooks, etc.)
5. What are the biggest challenges you face in taxes?

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The last two questions I have are more open ended and speculative, but I would love to hear your thoughts on what you think are the biggest challenges facing your farm, as well local farms in general?

Those are all the questions I have for you; is there anything you would like to ask me? Or, is there anything that I didn't touch on that you feel is important?

## **Vita**

Ethan Matthew Downs was born in Charlotte, North Carolina, to Timothy and Daleen Downs in July of 1991. Upon graduating from Appalachian State University with his bachelor degree in Building Science, he began a career in the commercial property industry back in Charlotte. After spending a few years in the industry, he began to develop a deep interest in food systems, specifically the local food system in the United States. This ultimately led him back to school so he could further develop fundamental business knowledge. He enrolled in Appalachian State University's master of Business Administration program where he began studying sustainable business and local food systems. During this time, he developed a comprehensive understanding of these systems and used this knowledge to create a business model for local farms that seeks not only to help small farms further develop their own businesses, but also aims to help build capacity of the local food system as a whole.

After graduation, Ethan plans to continue his research of local food systems through his entrepreneurial project, Know. This project will seek to connect local farms to local consumers through a simple and streamlined process, providing greater access to healthy, clean food for community members from the local farms within their own communities.